A MAY BEETLE WITH THE PRONOTUM SHOWING A COMPLETE MEDIAN DIVISION.[1]

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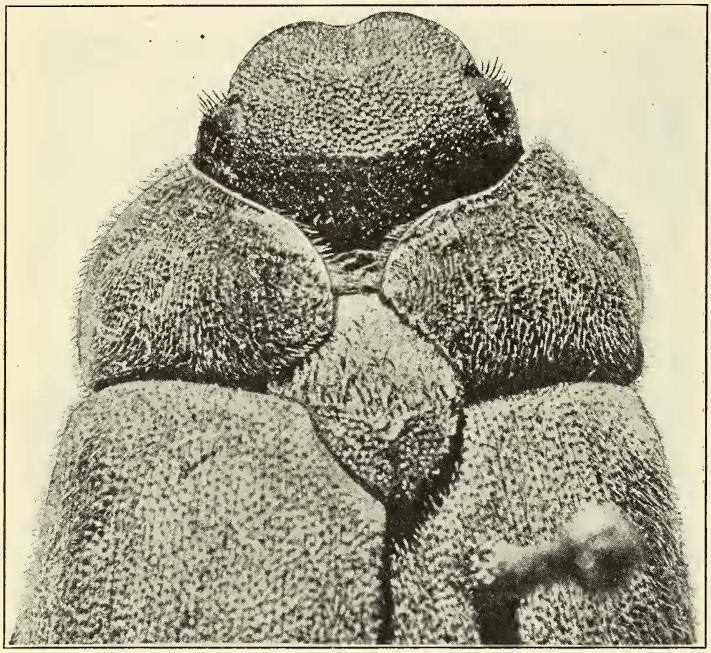

Several examples of Coleoptera having the pronotum more or less completely divided by a median cleft have been recorded in the literature of animal teratology. Of such examples known to the writer, nine have the pronotum completely divided so as to form two separate, right and left plates; in six others, either the division of the pronotum is incomplete, and results in the formation of two lobes, one right and one left, which are more or less broadly united by the mesal margins, or the extent of the division is not indicated in the published description; while in one example described by Kraatz the pronotum is divided into three lobes, one median and two lateral.

[1] Contributions from the Entomological Laboratories of the University of Illinois, Number 91.

Still another example of this type of insect malformation is presented by a specimen now before the writer. This is a female specimen of *Phyllophaga ilicis* Knoch, which was found in a lot of May beetles that had been collected on the ground under electric arc lights at Dalton, Georgia, on May 10, 1910, and preserved in alcohol.

In this specimen the pronotum is completely divided on the median line into two, distinct, right and left plates which are subequal in size, which, in general shape and in position, are related to each other as optical images, and which are approximately balanced with reference to the meson as an axis of symmetry. The details are very well shown in the accompanying figure. The lateral margins of the two pieces are approximately like those of a normal pronotum. The mesal margin, however, joins the cephalic and the caudal margins of each piece in a sweeping curve, so that no cephalo-mesal or caudo-caudal angles are formed. The arcuate mesal margins of the two pieces are separated by a distance of six-tenths of a millimeter at their nearest points, and their adjacent, curved outlines result in the formation of broadly V-shaped spaces before and behind, through which the occipital region of the head and a considerable area cephalad from the scutellum are exposed. The surfaces of the two pieces are not quite so uniformly curved as are the corresponding surfaces of a normal pronotum; but the flowing curves and the clearly defined modeling of the mesal margins of the two pieces seem to suggest that the malformation has resulted rather from an imperfect closure on the mid-dorsal line in the development of the pronotum than from any probable mechanical injury to an earlier stage of the insect.

Aside from the divided pronotum this specimen seems to be normal in every respect, and the fact that it was taken under an arc light would seem to be evidence that the malformation of the prothorax did not interfere seriously with the insect's ability to fly. While the probability that anyone may ever have an opportunity to do so is remote, it would be interesting to observe the effect of this type of abnormality upon the performance of the living insect. This individual obviously succeeded in digging its way from its pupal cell to the surface of the ground, but it would seem that the division of the pronotum might well reduce the strength of the tergal arch sufficiently to impair the effectiveness of the fossorial front legs, or in some way to modify the manner in which they are employed by the insect.

It should be noted that all of the examples of this particular type of insect abnormality known to the writer belong to the order Coleoptera. It would be strange, however, if it does not appear in other orders of insects, particularly in those orders which like the Coleoptera have a large prothorax. It is hoped that students of insects may report any such malformations that may be known to them, or that may be observed by them in the future.

Indeed, every example of any notable insect malformation should be placed on record by a published description and by a statement of the place where the specimen has been deposited. Such material has type value, and should be preserved, and cared for, and made accessible to persons interested in teratology, just as the type specimens of species should be preserved, and cared for and made accessible to taxonomists.

The specimen showing the malformation here described will be placed in the type series of the insect collections at the University of Illinois, where it may be examined by anyone interested in its further study.

Early Butterflies.—The favorable weather last spring caused the early appearance of the following male forms at Fall River, Mass.: *C. L. lucia,* April 3; *T. brizo,* April 21; *I. angustus,* April 22; *T. juvenalis,* April 23.—D. Prescott Rogers, Fall River, Mass.